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FOUD, HICHAM B				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/812,648

Applicant(s)

RAMIREZ ET AL.

Examiner

HICHAM B. FOUD

Art Unit

2467

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-24 and 26-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-24 and 26-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 07-28-2009 has been entered and considered.

Claims 21-24 and 26-37 are pending in this application.

Claims 1-20, 25 and 38 have been canceled.

Claims 21-24 and 26-37 are rejected as discussed below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-24 and 26-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the one or more available radio communication protocols" in line 15. There is insufficient antecedent basis for this limitation in the claim. Similar issue occurs in claim 34.

Claims 22-24 and 35-37 are rejected because of their dependency on the rejected claim.

Claim Objections

3. Claims 21-24 and 26-37 are objected to because of the following informalities:

In claim 21 line 16, the term "a desired radio communication protocol" seems to refer back to the same term in line 7. If this is true, it is suggested to change the term to --the desired radio communication protocol-- to avoid ambiguity. Similar issue occurs

for the term "a beacon" in line 14. Moreover, in claim 21 line 2, the term "A wireless" should be --a wireless--. Similar issues occur in claim 34.

Claims 22-24 and 35-37 are objected because of their dependency on the objected claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21-23, 26-28, 30-32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US 6,188,898) in view of Kuffner (US 2003/0235167).

For claim 21, Phillips discloses an apparatus, comprising: a wireless access point (see Fig.1; BST; base station) having a radio comprising two or more physical layer blocks (See Figure 2 elements DECT, PHS, GSM900); a configuration processor to arrange the two or more physical layer blocks to communicate according to one of at least two or more radio communication protocols or standards (see Figure 2 element "SELECT"); the configuration processor to determine the availability of the two or more physical layer blocks prior to the arrangement of a particular physical block to a desired communication protocol (see column 3 lines 56-64; when the protocol has been identified, the corresponding software package is retrieved and downloaded; "the download requires the availability of the physical block, otherwise how can be any

download?". The details of the mobile terminal are then checked to ensure that the terminal is registered and the call is set up according to the desired protocol and see column 2 lines 11-13); and a beacon transceiver to transmit a beacon to a remote device, wherein a beacon transmitted by said beacon transceiver provides an indication of the one or more available radio communication protocols (see column 3 lines 20-25; the system may provide access to mobile terminals using the GSM 900, DECT and DCS 1800 protocols and the use of beacon function and see column 2 lines 1-5) and a received reply from the remote device provides an indication of a desired radio communication protocol (see column 3 lines 20-25; the use of beacon function and see column 2 lines 1-5; wherein the terminal operating protocol is the desired communication protocol). Philips further discloses downloading the desired radio communication protocol and programming the radio to communicate according to the desired radio communication protocol (see column 56-64). Philips discloses all the subject matter with the exception of explicitly disclosing the reprogramming of an idle or less frequently used physical layer block according to the desired radio communication protocol in the case of there is no available physical layer block. However, Kuffner from the same or similar field of endeavor teaches the reassignment/reprogramming and the reconfiguration of the physical layer blocks (see Figure 1 and [0014]) wherein the reprogramming/reassignment can be based on priority, quality parameter and availability (see [0016] lines 8-13 and [0028] lines 1-14; GPS physical block is reprogrammed/reconfigured with CDMA2000 to insure voice communication instead of GPS information). Thus, it would have been obvious to the one skill in the art at the

time of the invention to recognize the need of reconfiguring/reprogramming an idle/available or less frequently used or less prioritized physical block as taught by the method of Kuffner into the invention of Philips for the purpose of reconfiguring physical layer blocks to accommodate the desired protocol and to marshal the available resources to improve the performance of the resources currently in use and therefore enhance system performance (Kuffner [0003] lines 9-11 and [0004] lines 13-14).

For claims 22 and 35, Kuffner further discloses an apparatus, said two or more physical layer blocks including software defined radio logic block being programmable to cause the two or more physical layer blocks to be reprogrammed to communicate according to at least one or more radio communication protocols (see Figure 1, the connection between System Manager (110) and Communication resource (102, 104 and 106) by the configuration control and see Figure 2 element SDR "software defined receiver).

For claims 23 and 36, Phillips in view of Kuffner discloses an apparatus, further comprising a memory having a database stored thereon, the database including information to configure the two or more physical layer blocks to communicate according to one of the at least two or more radio communication protocols (Phillips: see column 2 lines 19-24 and Kuffner: see Figure 1, "deployment Rules" and System Manager (110); inherently, the system manager must have a memory to save the deployment rules to execute them and see Paragraph 0036; the use of RAM or ROM).

As per claim 26, method claim 26 and apparatus claim 21 is related as method and apparatus of using same, with each claimed element's function corresponding to

the claimed method step. Accordingly claim 26 is similarly rejected under the same rationale as applied above with respect to apparatus claim 21.

As per claims 30, Kuffner teaches a computer readable medium that includes a storage medium that stores programs that implements the embodiments (see page 4 [0035] and [0036]). The remaining steps are rejected under the same rationale as applied to the apparatus/method steps of rejected claims 21/26.

For claims 27 and 31, Phillips further discloses a method, further comprising, if the desired communication protocol is not supported, determining whether a download of the desired radio communication protocol is available, and if available, downloading the desired radio communication protocol and programming the radio to communicate according to the desired radio communication protocol (see column 56-64; when the protocol has been identified, the corresponding software package is retrieved and downloaded. The details of the mobile terminal are then checked to ensure that the terminal is registered and the call is set up according to the desired protocol).

For claims 28 and 32, Phillips in view of Kuffner discloses a method comprising determining whether a physical layer block is currently programmed to operate according to the desired radio communication protocol, and when so, communicating with the remote device according to the desired radio protocol (Kuffner: see Figures 1, 4 and paragraph 0014; 102 might be by default be an 800 MHz and 104 might by default be a 1575 MHZ and suggested that these physical layer blocks (102 and 104) could be subsequently reassigned as well), and when not currently programmed, then programming at least one physical layer block to operate according to the desired radio

communication protocol and then communicating with the remote device according to the desired radio communication protocol and then communicating with the remote device according to the desired radio communication protocol (Phillips: see column 3 lines 56-64; when the protocol has been identified, the corresponding software package is retrieved and downloaded. The details of the mobile terminal are then checked to ensure that the terminal is registered and the call is set up according to the desired protocol).

For claim 34, Phillips discloses an apparatus, comprising: a wireless access point (see Fig.1; BST; base station) including a network interface circuit having a radio comprising two or more physical layer blocks (See Figure 2 elements DECT, PHS, GSM900); an omnidirectional antenna to couple to said radio (see Figure 2; antenna "22"); a processor to arrange the two or more physical layer blocks to communicate according to one of at least two or more radio communication protocols (see Figure 2 element "SELECT") wherein said two or more physical layer blocks have a media access layer block being implemented at least in part by said processor (see Figure 2; soft radio and see DECT, GSM900 and the antenna "22"; the physical blocks must have media access layer to communicate, this is the standard based on OSI model, layer 2 "data link layer" that uses MAC addresses; otherwise how would the soft radio functions without this layer?); the processor to determine the availability of the two or more physical layer blocks prior to the arrangement of a particular physical block to a desired communication protocol (see column 3 lines 56-64; when the protocol has been identified, the corresponding software package is retrieved and downloaded; the

download requires the availability of the physical block. The details of the mobile terminal are then checked to ensure that the terminal is registered and the call is set up according to the desired protocol and see column 2 lines 11-13); and a beacon transceiver to transmit a beacon to a remote device, wherein a beacon transmitted by said beacon transceiver provides an indication of the one or more available radio communication protocols (see column 3 lines 20-25; the system may provide access to mobile terminals using the GSM 900, DECT and DCS 1800 protocols and the use of beacon function and see column 2 lines 1-5) and a received reply from the remote device provides an indication of a desired radio communication protocol (see column 3 lines 20-25; the use of beacon function and see column 2 lines 1-5; wherein the terminal operating protocol is the desired communication protocol). Philips further discloses downloading the desired radio communication protocol and programming the radio to communicate according to the desired radio communication protocol (see column 56-64). Philips discloses all the subject matter with the exception of explicitly disclosing the reprogramming of an idle or less frequently used physical layer block according to the desired radio communication protocol in the case of there is no available physical layer block. However, Kuffner from the same or similar field of endeavor teaches the reprogramming/reassignment and the reconfiguration of the physical layer blocks (see Figure 1 and [0014]) wherein the reprogramming/reassignment can be based on priority, quality parameter and availability (see [0016] lines 8-13 and [0028] lines 1-14; GPS physical block is reconfigured with CDMA2000 to insure voice communication instead of GPS information). Thus, it would have been obvious to the one skill in the art

at the time of the invention to recognize the need of reconfiguring/reprogramming an idle/available or less frequently used or less prioritized physical block as taught by the method of Kuffner into the invention of Phillips for the purpose of reconfiguring physical layer blocks to accommodate the desired protocol and to marshal the available resources to improve the performance of the resources currently in use and therefore enhance system performance (Kuffner [0003] lines 9-11 and [0004] lines 13-14).

5. Claims 24, 29, 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips in view of Kuffner and further in view of Allison et al (US 6,167,032).

For claims 24 and 37, Phillips in view of Kuffner discloses all the subject matter with the exception of further comprising a hub, and said radio including at least one or more media access control blocks to couple to a network through said hub. However, Allison et al teaches an Ethernet MAC chip that couples to a network (Ethernet physical layer) through a hub (Ethernet interface) (see Figure 1; element 16 "Ethernet MAC chip, element 12 "Ethernet physical layer" and element 34 "Ethernet interface"). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the teaching of Allison et al into the invention of Phillips in view of Kuffner for the purpose of connecting to the Ethernet network using MAC addresses and through the hub that is used as an interface.

For claims 29 and 33, Phillips further discloses a method comprising programming two or more physical layer blocks to communicate according to two or more radio communication protocols (Phillips: see Figure 2 and column 3 lines 23-27;

the system may provide access to mobile terminals using the GSM 900, DECT and DCS 1800 and column 3 lines 56-64; when the protocol has been identified, the corresponding software package is retrieved and downloaded). Phillips in view of Kuffner discloses all the subject matter with the exception of coupling the physical layer blocks to a network through a hub. However, Allison discloses the coupling of physical layer blocks to a network through the hub (see Figure 1; element 16 "Ethernet MAC chip, element 12 "Ethernet physical layer" and a hub: element 34 "Ethernet interface"). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the teachings of Allison et al into the invention of Phillips in view of Kuffner for the purpose of connecting to another network through the hub such as an Ethernet network using MAC and therefore increasing the adaptability of the system.

Response to Argument

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.
7. Applicant's arguments filed have been fully considered but they are not persuasive.

In pages 8-9, the applicant argues that Phillips fails to disclose the missing language of the claimed subject matter in regard of the added limitations to the independent claims "a beacon transceiver to transmit a beacon to a remote device, wherein a beacon transmitted by said beacon transceiver provides an indication of the one or more available radio communication protocols and a received reply from the

remote device provides an indication of a desired radio communication protocol".

However, the examiner respectfully disagrees because:

First of all, the missing language as argued by the applicant does **NOT** need to be used by Phillips as long as the function of the missing language of the claimed invention is taught/suggested by Phillips.

Second of all, the argued limitation comprises of "an **indication** of the one or more available radio communication protocols" which is broad and it is **NOT** stated in the claim of how the indication is done. So, if a claim is subject to more than one interpretation, at least one of which would render the claim unpatentable over the prior art, the examiner should reject the claim over the prior art based on the interpretation of the claim that renders the prior art applicable. Ex parte Ionescu, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984). In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Therefore, claims are given their broadest reasonable interpretation The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). Also, Phillips teaches that the base stations operate at appropriate frequencies (see Phillips: col.3 lines 20-22) and since the protocols used by the base station differ by frequencies (GSM 900, DCS 1800), it is clear that the appropriate frequencies are used as an indication of the **one** or more available radio communication protocols. In addition, Phillips in col.2 lines 1-5 discloses that multimode base station having means for interrogating mobile terminal so as to determine that terminal's operating protocol. And, it is clear that the term "interrogating" requires sending

requests and receiving replies to determine the terminal's operating protocol, wherein the terminal's operating protocol is the claimed desired radio communication protocol.

Third of all, Phillips clearly teaches the claimed/argued "a beacon transceiver", since Phillips teaches a base station that is a transceiver (see Figure 1; BST) and which uses a **BEACON FUNCTION** (see col.3 lines 22-23). Therefore, a person of ordinary skill in the art would recognize that a base station comprises a beacon transceiver and which reads on the claimed "a beacon transceiver".

Moreover, in page 10 of the Remarks, the applicant argues that Phillips teaches away from the use of a beacon without giving any concrete evidence to back up his argument. However, the examiner respectfully disagrees because the burden is on the applicant to give clear and concrete evidence to show "teaching away". Furthermore, it is clear from col.3 lines 22-23 of Phillips that he teaches the use of a beacon ("**a beacon function for those mobile communications protocols that require such a function**"). Therefore, it is clear that Phillips in at least this embodiment teaches the claimed beacon function.

Finally, Applicant repeatedly argues that Phillips does not teach the argued limitation (see above). Examiner respectfully disagrees; the feature of the limitation listed above is clearly met by Phillips. Phillips explicitly designates the argued limitation. Phillips does not choose to use his own lexicography to designate the argued limitation. However, the steps performed by Phillips are the same regardless to the terminology used. Phillips clearly teaches a beacon transceiver to transmit a beacon to a remote device, wherein a beacon transmitted by said beacon transceiver provides an indication

of the one or more available radio communication protocols (see column 3 lines 20-25; the system may provide access to mobile terminals using the GSM 900, DECT and DCS 1800 protocols and the use of beacon function and see column 2 lines 1-5) and a received reply from the remote device provides an indication of a desired radio communication protocol (see column 3 lines 20-25; the use of beacon function and see column 2 lines 1-5; wherein the terminal operating protocol is the desired communication protocol).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although

the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUAD whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj, Kumar can be reached on 571-272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2467

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hicham B Foud/
Examiner, Art Unit 2467
11/07/2009

/Hong Cho/
Primary Examiner, Art Unit 2467